



Changes in some reproductive indices of male Angel brood stocks, *Pterophyllum Scalare*, in exposure to electromagnetic waves

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Abstract

The aim of this study was to investigate the effect of electromagnetic waves (900 MHz) on some of reproductive indices in male brood stocks of angel fish during 10 days in three experimental groups including: control (without receiving waves), treatment 1 and treatment 2 (each one, 4 times a day and each time for 30 minutes in faced with mobile phones in standby position and calling mode, respectively). At the end of the experiment, biometry, blood sampling from caudal vein, centrifuge and serum isolation, determination of LH, dissection, GSI and HIS calculation, Gonadal sampling, and classical histology with Hematoxylin-Eosin staining on testis tissue were done. The GSI was lower in treatments 1 and 2 than control group. The HSI of control group was less than treatments 1 and 2. The mean LH level in male brooders of treatment 1 and 2 was significantly higher than those in control group. In testis tissues of both treatments (1 and 2) have shown several histopathologic signs, such as fibrosis and degradation in the lobular epithelium, cellular and stroma degradation in the lumen of the lobules and extensive tissue destruction in the sperm tubules. The results show that the 900 MHz electromagnetic waves affect the reproductive indices of male angel fish and reduce the reproductive capacity of them.

Keywords: Histology, mobile phone, Gonad, LH